

ABSTRACT

A distributed storage system provides a method and apparatus for storing, retrieving, and sharing data items across multiple physical storage devices that may not always be connected with one another. The distributed storage system of the present invention comprises one or more 'partitions' on distinct storage devices, with each partition comprising of a group of associated data files. Partitions can be of various types. Journal partitions may be written to by a user and contain the user's updates to shared files. In the preferred embodiment, journal partitions reside on a storage device associated with a client computer in a client-server architecture. Other types of partitions, library and archive partitions, may reside on storage devices associated with a server computer in a client-server architecture. The files on the journal partitions of the various clients may, at various times, be merged into a consolidation file or a file resident within the library partition. If two or more clients attempt to update or alter data related to the same file, the system resolves the conflict between the clients to determine which updates, if any, should be stored in the library partition. The merge operation may occur at various time intervals or be event driven. The archive partition stores files from the library partition.